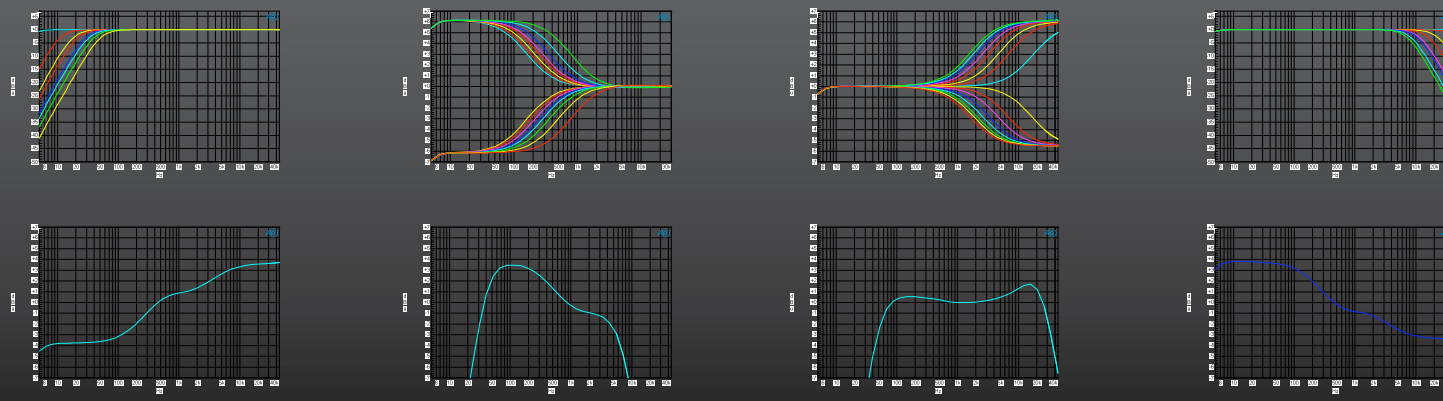
DANGEROUS MUSIC

BAX EQ®

The Dangerous Music Equalizer

USER GUIDE



SAFETY REVIEW

The Exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying this product

Certain precautions should be taken when using electrical products. Please observe the safety hints by reading the manual and obtaining qualified help if necessary to adhere to the precautions.

1. Always use a properly grounded power supply cord with this product. Please do not defeat the ground pin on the mains plug. This connection provides earth to the chassis and signal grounds inside the device for clean and quiet operation.

2. Avoid high temperature operation in equipment racks by providing air circulation. The number one killer of electronic gear is HEAT. Vented rack panels may look like wasted space to an interior decorator, but they look like beauty to a technician or equipment designer! If the front panel is hot, it is roasting inside the box.

3. Avoid areas of high magnetic fields. The steel chassis is designed to shield the circuits from EMI and RFI (magnetic and radio interference). When installing equipment in racks, it is prudent to put power amplifiers and large power supplies at least several rack spaces, if not in a different rack, away from equipment that deals with low level signals. Separation of high level and low level equipment can pre-empt trouble caused by heat and EMI.

4. Care should be taken to avoid liquid spills around equipment. If a spill occurs, please shut off the gear and disconnect the mains. A qualified technician should investigate accidents to prevent further equipment damage or personnel hazards caused by spills.

5. If one is uncomfortable with opening gear and changing jumpers or making adjustments, please seek qualified help if necessary.

6. If adjustments or jumper changes are required, please disconnect the mains plug before opening the top. Dropped screws or tools on a live circuit board can manifest themselves as burn marks and smoked components. While we feel your pain, (been there) subsequent damage is not covered by the warranty.

Dangerous Music Incorporated reserves the right to change the specifications or modify the designs of its equipment. Sending in the registration card is our way of keeping in touch with users of our equipment should this become necessary. Registration information is always kept confidential and never disclosed to third parties for any reason. Company contact information is on the last page of this manual.

The CE sign on this product signifies the fact that the Additional Switching System® has been tested and verified to conform to the applicable standards of 89/336/EEC.EN55103-1 (emissions) EN61000-2 (immunity) and EN60065:2002 (safety requirements)

This product uses components of the types and quantities that comply with the EC RoHS standard 2002/95/EC. A list of suppliers and materials is available from DMI. We tightly control production to use top quality materials.

THANK YOU

Thank you for choosing products from the exciting and innovative line of Dangerous Music recording equipment. Many years of reliable service can be expected from our gear. This is made possible through careful design, construction, and component choices by recording industry veterans.

The Dangerous Music Bax EQ is designed to sweeten life by opening your sonic vistas like nothing previously heard. There are comprehensive tips and application notes in this user's guide, so don't skip the read.

If you have any suggestions for future products, feel free to forward them!

DANGEROUS MUSIC

ABOUT DANGEROUS MUSIC

"Audio Integrity: non-negotiable." This is the credo upon which Dangerous Music is founded. Conceived and designed by end users–not by engineers in lab coats- the results are products that resurrect dynamic range, punch, intelligibility and emotion. These high-fidelity, uncompromised signal paths are achieved by harnessing over 20 years of Chris Muth's design wizardry; creator of infamous custom black boxes for world class facilities like Hit Factory, Masterdisk, Absolute Audio and Sterling Sound Mastering. Then the critical listening skills of golden-eared luminaries are applied, with the result being musical tools that fulfill the actual needs of today's flexible computer based studio.

TABLE OF CONTENTS

Overview	1
BAX EQ Rear Panel Features & Benefits	1
BAX EQ Front Panel Features, Benefits & Connection	2
BAX EQ Application Notes	10
Specifications	13
Warranty	14

OVERVIEW

The Dangerous BAX EQ was inspired by Peter Baxandall's legendary 1950's design that has graced hundreds of millions of home hi fi systems. The BAX EQ's unique design carves broad, open curves and gentle sloping cuts that are essential for recording, mixing and mastering. Seeking the elusive Top 10 vocal sound? Add that perfect sheen of air. Chasing the chunk in grinding guitars? Dial in the meat. Lush midrange, bottomless bass, and space are achieved effortlessly. Please welcome the BAX EQ to your tools for success- no radical sonic signature to overshadow the music... just your music: neater, richer, sweeter.

Unpack this cornicopic ear treat and rejoice! Inside the box you'll find the BAX EQ and standard 3 Pin IEC power cable (don't let your guitar player steal this for his Marshall™ head!)

Note: We recommend reading the entire manual (it's short), but If you need immediate sexy sculpting satisfaction, jump ahead to page 10. Just remember to circle back to the begining!

BAX EQ: Rear Panel Connections

[REAR PANEL INPUTS AND OUTPUTS PICTURED ABOVE]

1. INPUTS & OUTPUTS

Feature: Neutrik XLR Connectors.

Benefit: More surface area for happy electrons to migrate through and no off shore enameled look alike connectors that "almost" fit.

Note: All connections wired pin 2 hot as per AES standards.

Tip: ✌ Cables DO make a difference. Ask for Mogami 2534 interconnects.

Tip: ✌ To use in unbalanced mode, take your high quality Mogami cable and tie pin 3 to 1 on the XLRs

[REAR PANEL POWER SECTION PICTURED ABOVE]

2. A/C CABLE & SWITCHING

Feature: Three pin IEC cable.

Benefit: Simple to replace if lost.

Feature: Selectable voltage.

Benefit: Travel with your favorite gear anywhere in the world while spreading the equalized truth. ("Equalised" in the UK!)

Operation: Please review the mains voltage in the red window before plugging in the unit or electrifying events may transpire. To change it, use a screwdriver to gently pry the mains inlet module's cover open and flip the fuse block around so the correct voltage appears in the window.

Tip: The power switch is on the inlet module. Seat the AC cable completely and use properly grounded power mains for safe and quiet operation.

Tip: If the BAX EQ will not power on and the power is known to be good, check the fuses under the inlet module's cover. Use 500 milliamp fast blow for 120V (America) and 250 milliamp fast blow for 240V (Europe).

Bax EQ: Front Panel Features & Benefits

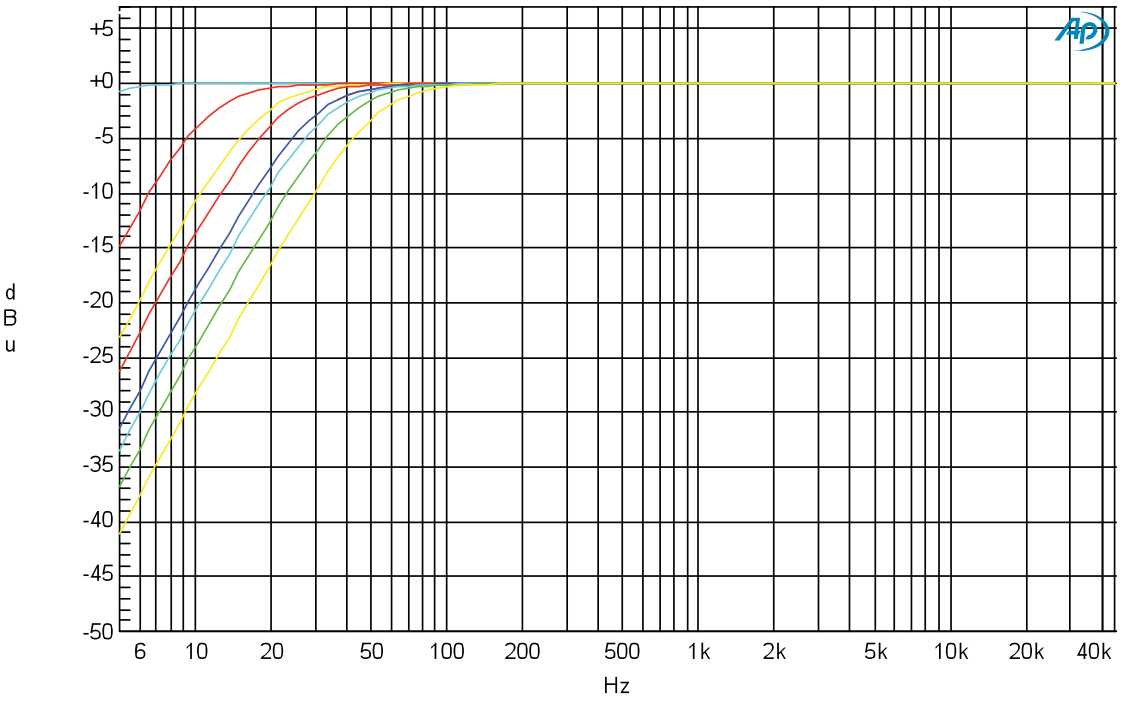
1. LOW FREQUENCY CUT FILTERS

[LOW FREQUENCY CUT KNOB PICTURED ABOVE]

Feature: Infrasonic rumble reduction.

Benefit: INFRASONIC RUMBLE is a PC term for the omnipresent low frequency garbage that loiters unnoticed in the audio shadows. This headroom consuming thief propagates from HVAC units, jets, subways and yes, Rayleigh Waves (i.e. earthquakes and

Elephants.) Eliminating it dramatically increases low end clarity and punch while allowing higher maximum levels on any playback device.



[LOW FREQUENCY FILTER GRAPH PICTURED ABOVE]

Feature: 12 dB per octave roll off.

Benefit: These filters are smooth, accurate and musical sounding without artifacts.

Tip: While listening to a familiar mix, turn the knob and listen to the pleasurable changes.

Feature: Individual relay bypasses.

Feature: The first position is beyond the audio band.

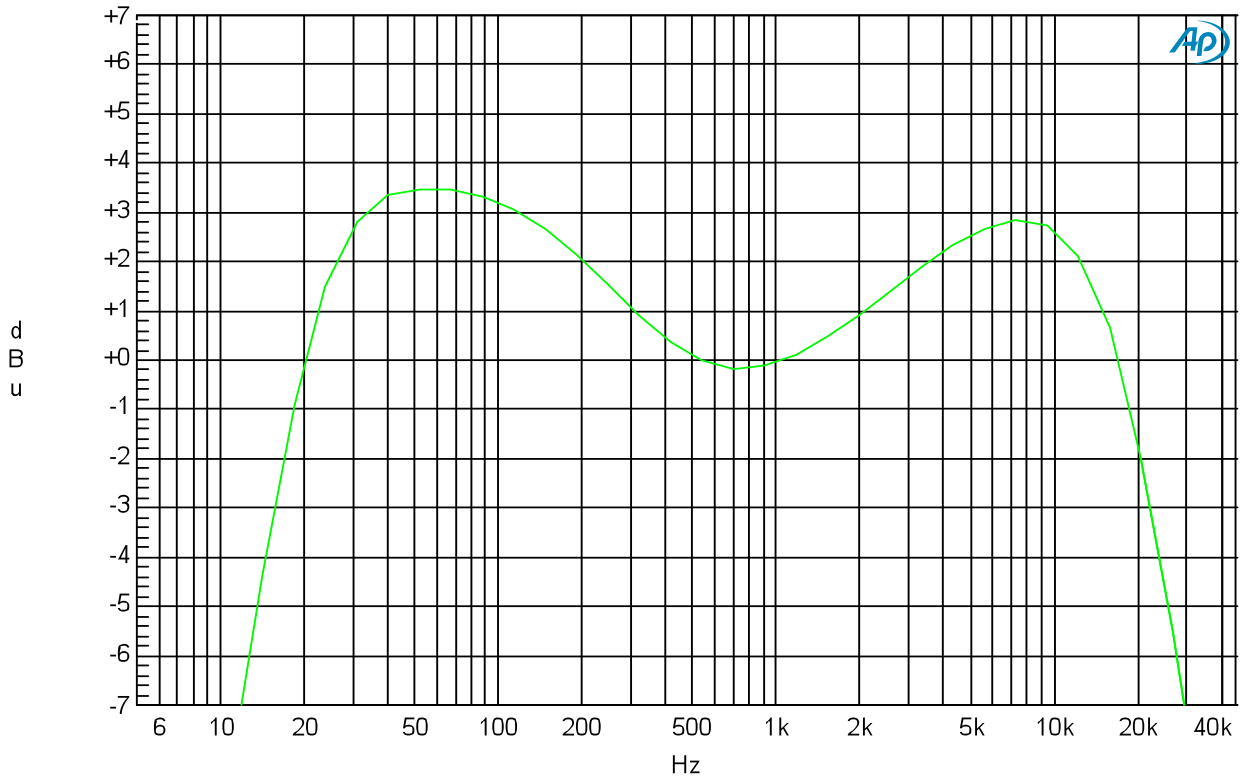
Benefit: Perfect for filtering DC to avoid offsets.

Benefit: Relays remove the filters entirely from the signal path until desired, for true A/B comparisons. In comparison, many EQs leave the filter in the circuit, even when it is bypassed. This potentially adds noise, distortion and phase shift. The BAX EQ places only the single selected frequency (or none) into the audio chain.

Tip: Always leave it engaged during tracking and mixing to relieve stress on your converter's filters. See **INFRASONIC RUMBLE** above.

Tip: Employ these knobs in conjunction with the shelf controls to instantly create remarkably musical contours.

Operation: Simply rotate the knob to the appropriate frequency and trust your ears.



[EXAMPLE OF FILTERS AND SHELFS COMBINED IN THE GRAPH PICTURED ABOVE]

2. LOW FREQUENCY SHELF

[LOW FREQUENCY SHELF KNOB PICTURED ABOVE]

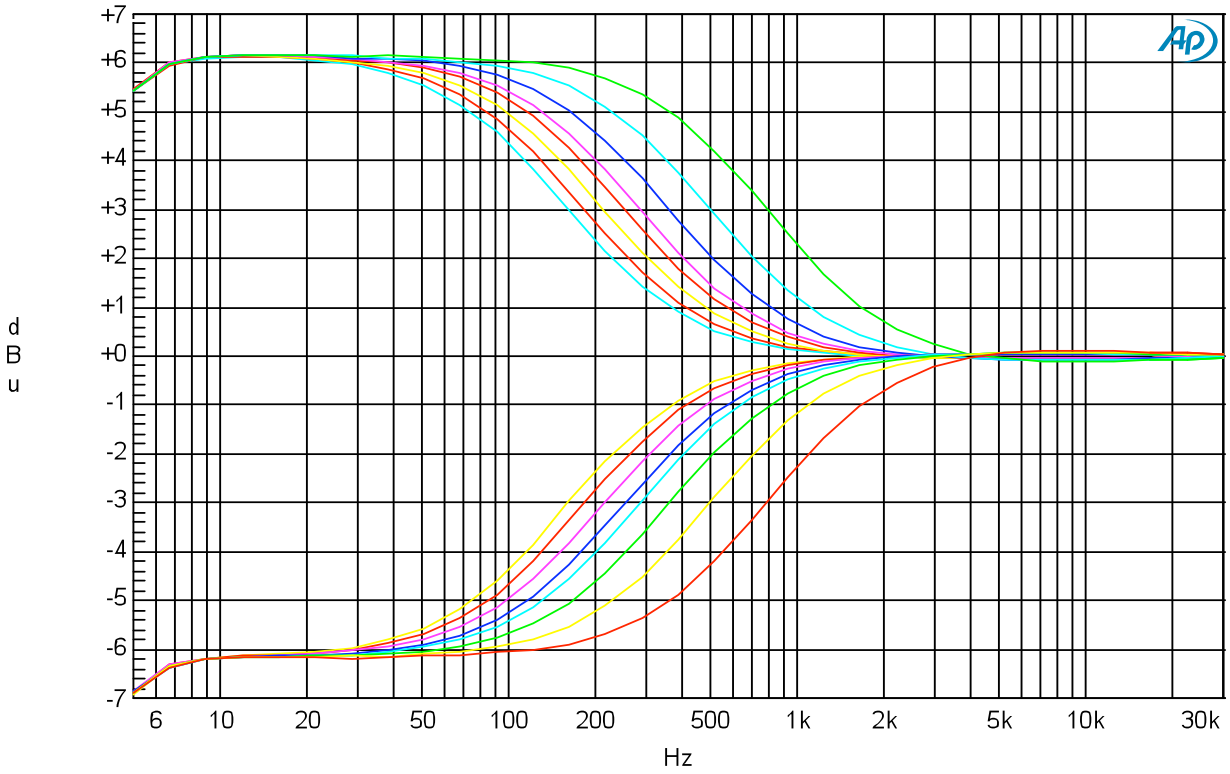
Feature: Broad bandwidth shelving EQ that affects several octaves.

Benefit: Instead of a surgical or chainsaw EQ that targets problems like 50 or 60 cycle hum, but often comes with an audio sacrifice, the BAX EQ is shapely, sweet with minimized phase delay for sexy sonic sculpting.

Tip: The frequencies noted on the faceplate reside at the bottom shoulder of the slope and reach way into the midrange, thus providing a remarkably natural and smooth character.

Operation: Increase the tonal power by engaging the filters in conjunction with the boost/cut. Simultaneously boost with the main

controls and cut with the filter.



[LOW FREQUENCY SHELF GRAPH PICTURED ABOVE]

3. LEFT & RIGHT LOW FREQUENCY LEVEL CONTROLS

[LEFT AND RIGHT LOW FREQUENCY LEVEL CONTROLS PICTURED ABOVE]

Feature: Individual Left and Right Controls.

Benefit: Discrete left and right controls allow for the correction of any stereo low frequency imbalance in .5 dB steps. Left channel need a hair less whomp? Pull it down a half dB or so as needed.

Benefit: Leverage the BAX for M/S stereo tracking or mixing (requires a Mid-Sides box like the Dangerous Master or S&M).

Feature: Stepped attenuators.

Benefit: Stepped knobs provide for the repetition of previous settings with deadly accuracy. Producer requesting a touch more thump? Return to your prior settings and add judiciously as required.

4. LEFT & RIGHT HIGH FREQUENCY LEVEL CONTROLS

[LEFT AND RIGHT HIGH FREQUENCY LEVEL CONTROLS PICTURED ABOVE]

Feature: Individual Left and Right Controls.

Benefit: Identical to the low frequency level controls, discrete left and right controls allow for the correction of any stereo high frequency imbalance in .5 dB steps. Left channel need a hint more than the right? Bring it up a half dB or so as needed.

Feature: Stepped attenuators.

Benefit: Stepped knobs provide for the repetition of previous settings with deadly accuracy. Producer requesting a touch more air? Return to your prior settings and add judiciously as required.

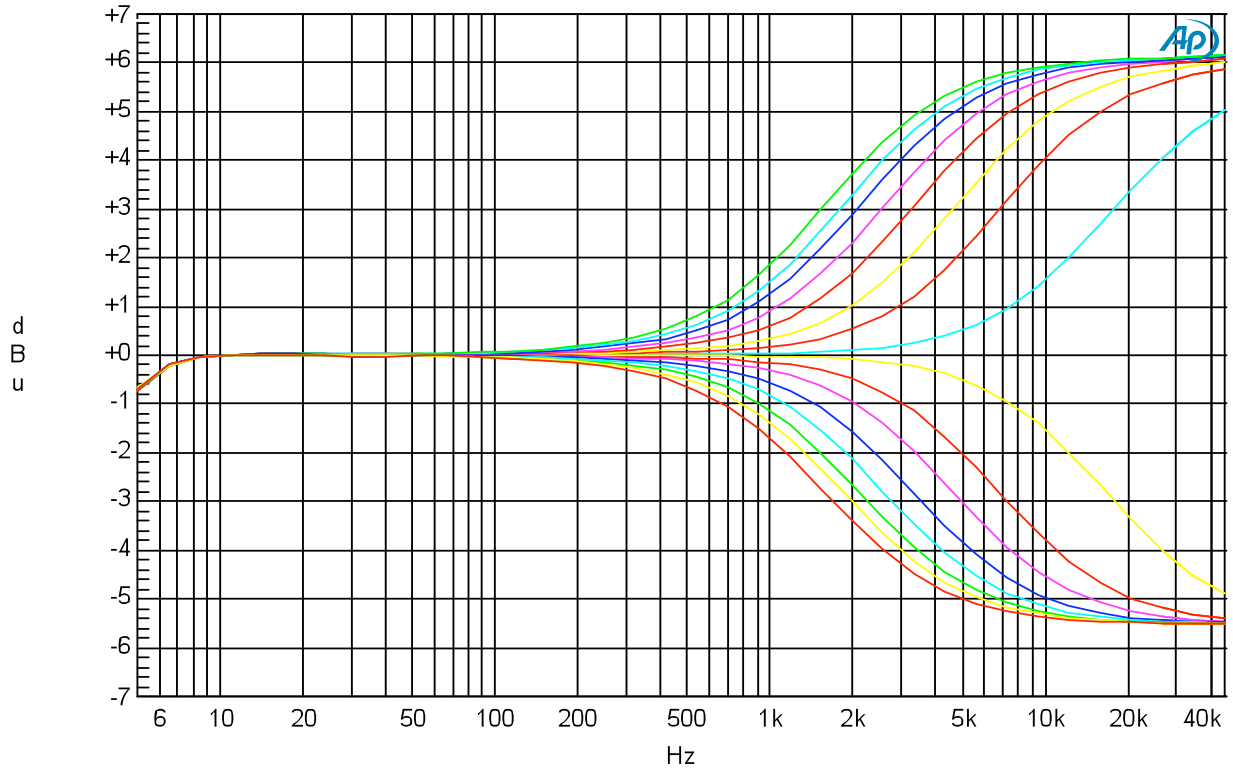
5. HIGH FREQUENCY SHELF

[HIGH FREQUENCY SHELF KNOB PICTURED ABOVE]

Feature: Broad bandwidth shelving EQ that affects several octaves.

Benefit: Instead of a surgical or chainsaw EQ that targets problems like string buzz, but often comes with an audio sacrifice, the BAX EQ is shapely, sweet with minimized phase delay for subtle, sexy sonic sculpting.

Tip: The frequencies noted on the faceplate reside in the middle of this slope, thus corresponding with the most audible band. The highest frequency shoulder is approximately twice the listed frequency (where the cut/boost is exactly 5dB). So for example, when modifying 1.6kHz, a 5dBu boost occurs at 3.2kHz.



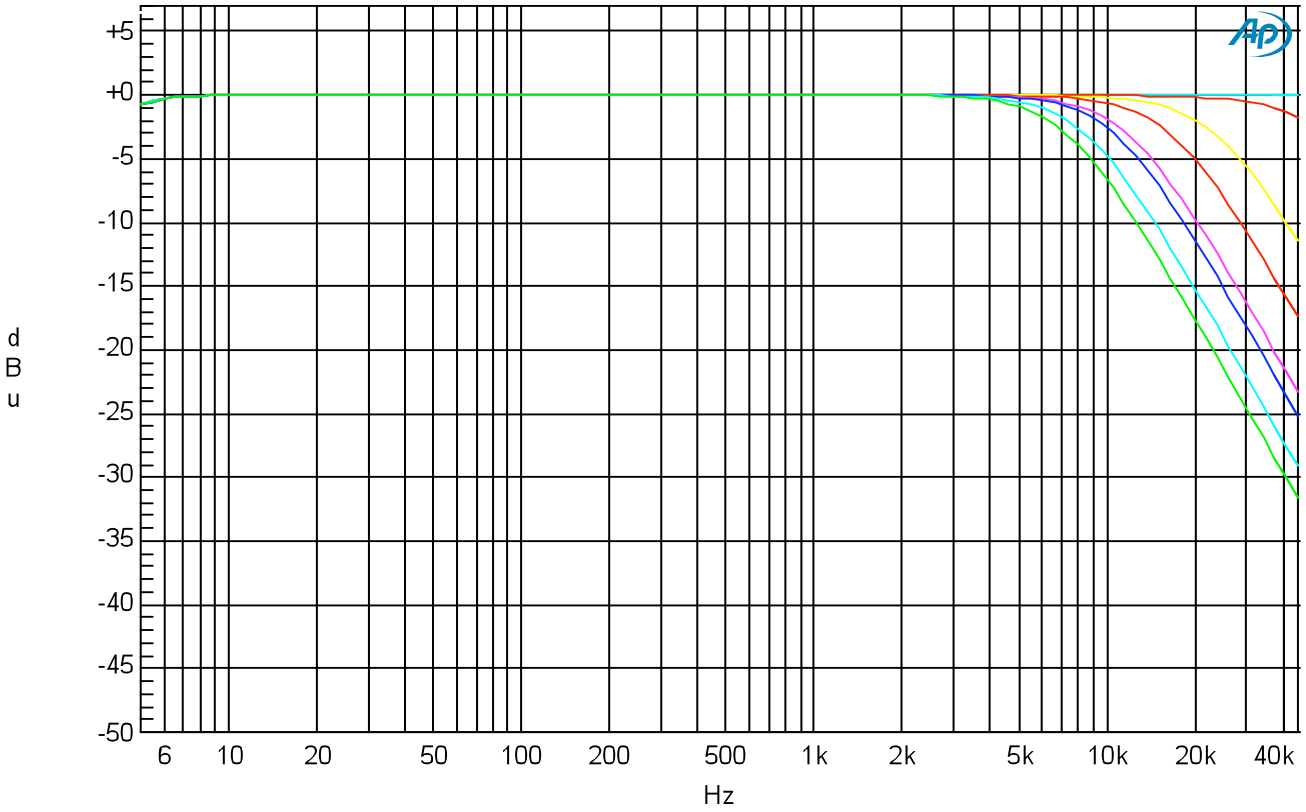
[HIGH FREQUENCY SHELF GRAPH PICTURED ABOVE]

6. HIGH FREQUENCY CUT

[LOW FREQUENCY CUT KNOB PICTURED ABOVE]

Feature: Ultrasonic Noise Reduction

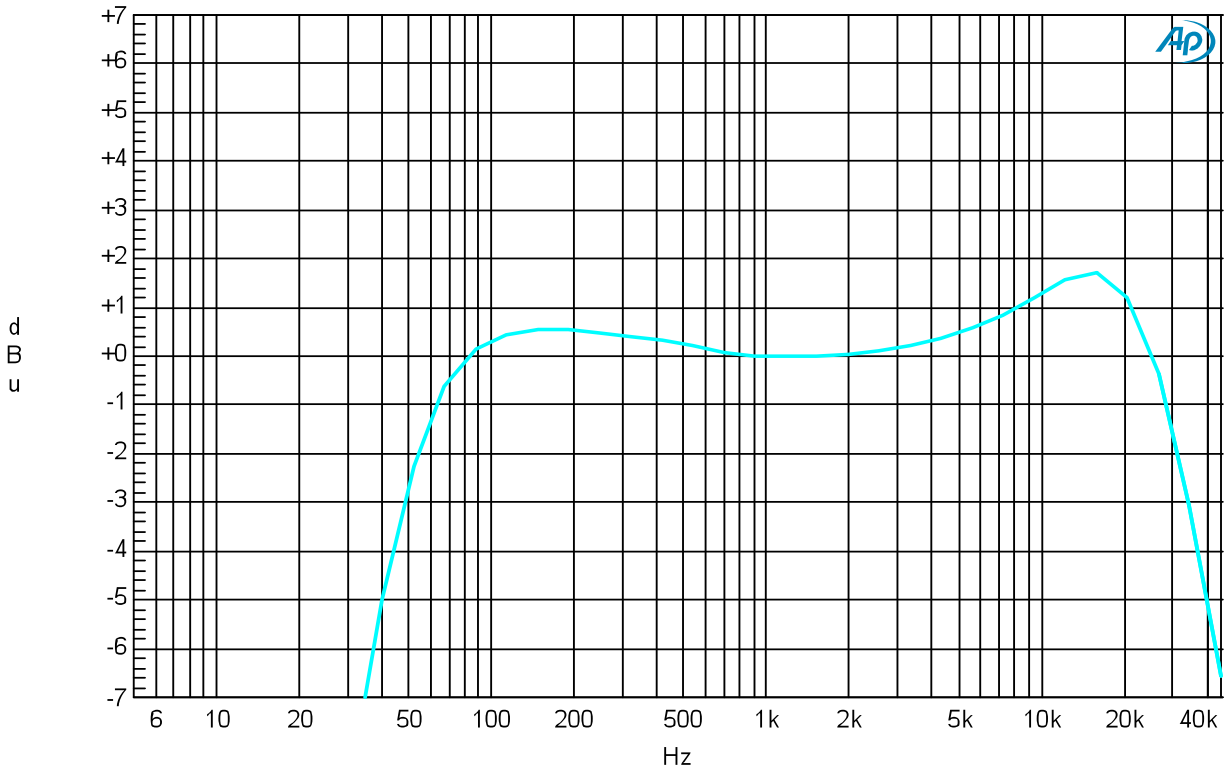
Benefit: ULTRASONIC or OUT OF BAND NOISE is an A/D converter's audio nemesis. Derived from a myriad of man made and natural sources it propagates slew rate overload, ultimately manifesting itself as harsh, brittle sound.



[HIGH FREQUENCY FILTER GRAPH PICTURED ABOVE]

Tip: ✌ While tracking, utilize the HI CUT FILTER. Especially when boosting bodacious amounts of top end, this practice will reveal a bright & airy treble that is never harsh or blaring. Perfect for adding "air" to a ribbon mic and conversely, for "gentling up" an overly bright and sassy condenser mic.

See the graph on the next page for a visual example.

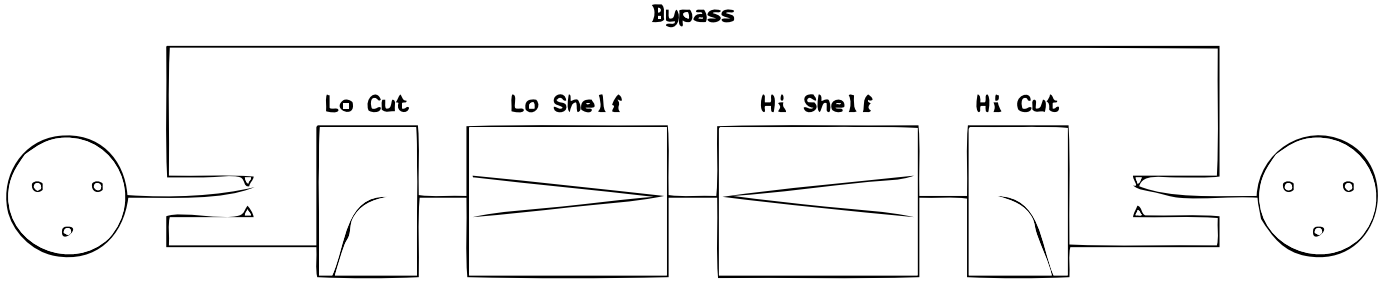


[EXAMPLE OF FILTERS AND SHELVES COMBINED IN THE GRAPH PICTURED ABOVE TO CRAFT A WARM SHIMMERING VOCAL]

7. ENGAGE IN & OUT

Feature: Hard wire bypass ENGAGE SWITCH.

Benefit: Allows true A/B comparisons by completely removing the hardware from the circuit while in bypass.



Bax EQ: Application Notes

1. COMBINING CUT AND LEVEL CONTROLS

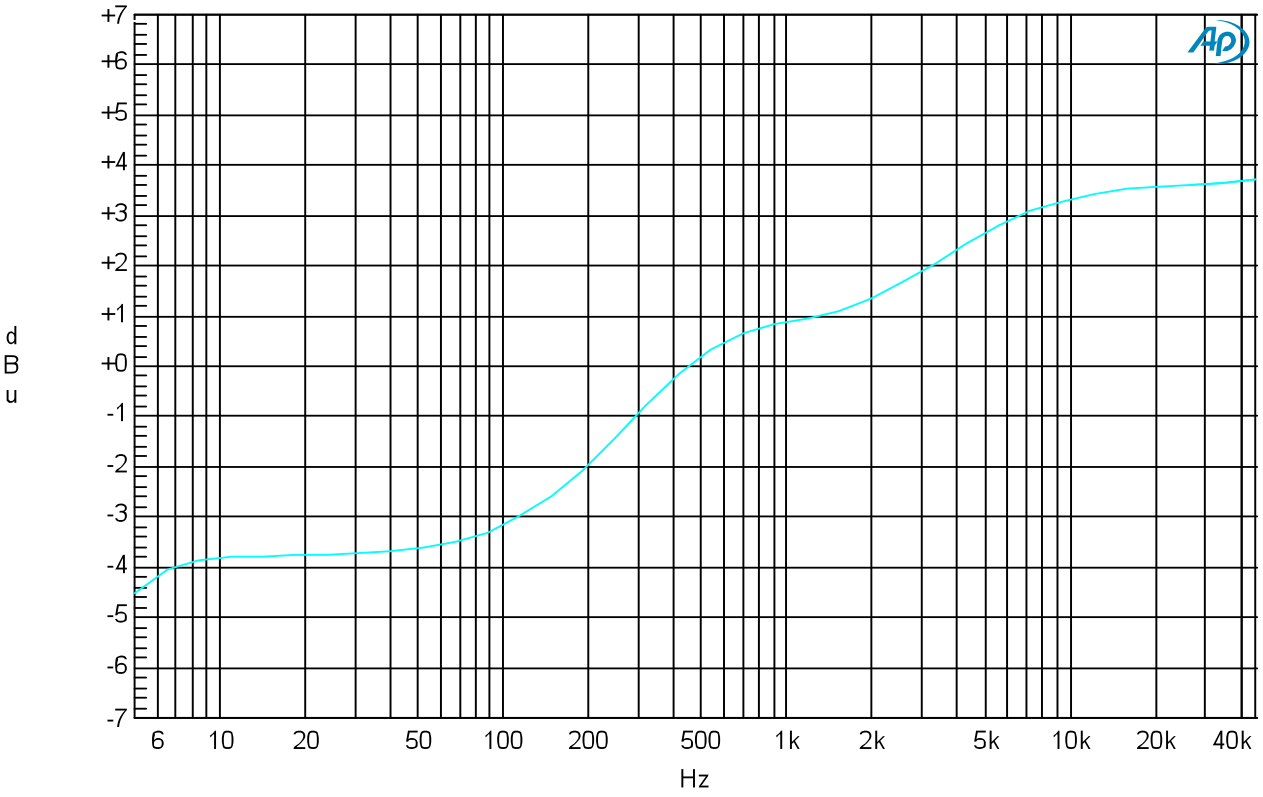
Tip: To achieve more bottom from a mix, cut first and then add. The result will be tighter, punchier low end.

Tip: Leverage the BAX for tracking. Even in "cut only mode", utilize it on every track to control the source's frequency range, thus dramatically focusing the energy and making the mix process a snap.

Tip: Increase the tonal power by engaging the filters in conjunction with the boost/cut. Simultaneously boost with the main controls and cut with the filter.

Tip: Engage the BAX in conjunction with a surgical style eq to improve the latter's efficiency.

Tip: Add to any outboard gear chain (i.e. mic pre, comp, eq) to take it from good to great without altering the original character.

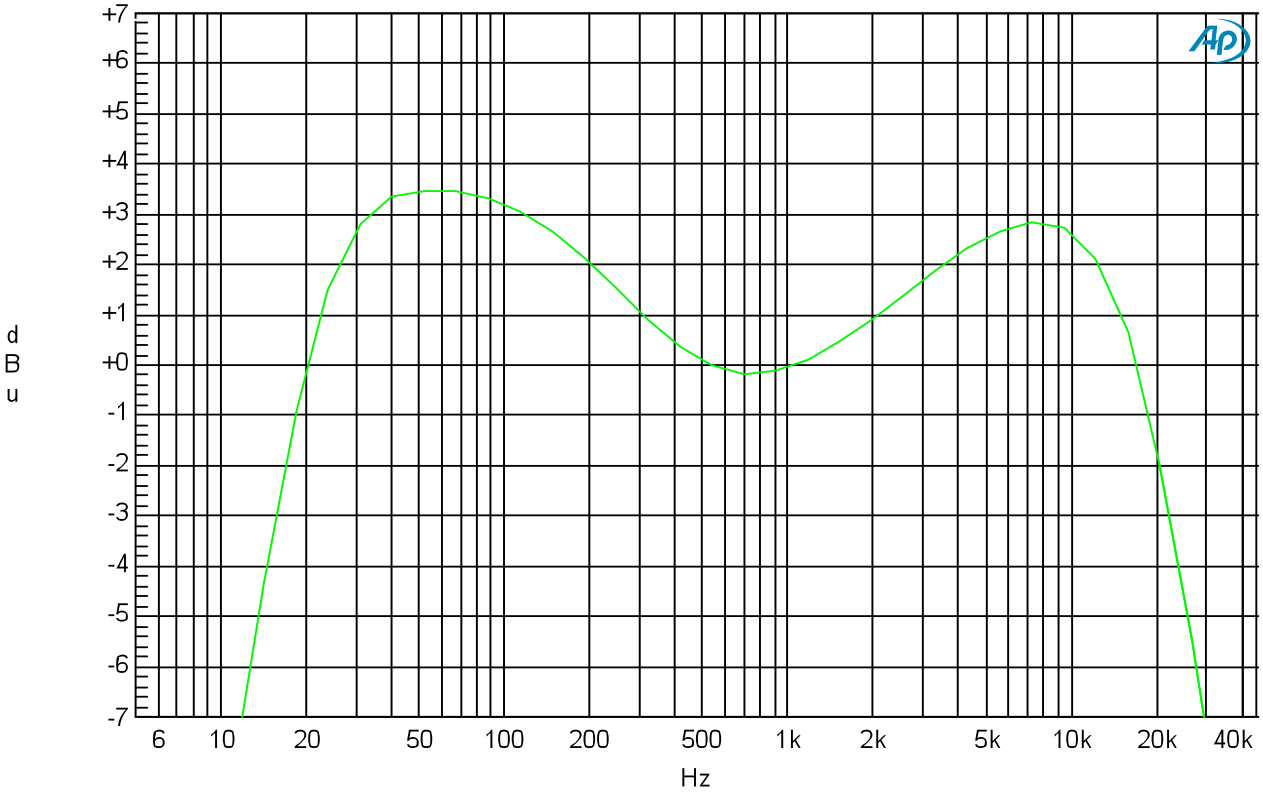


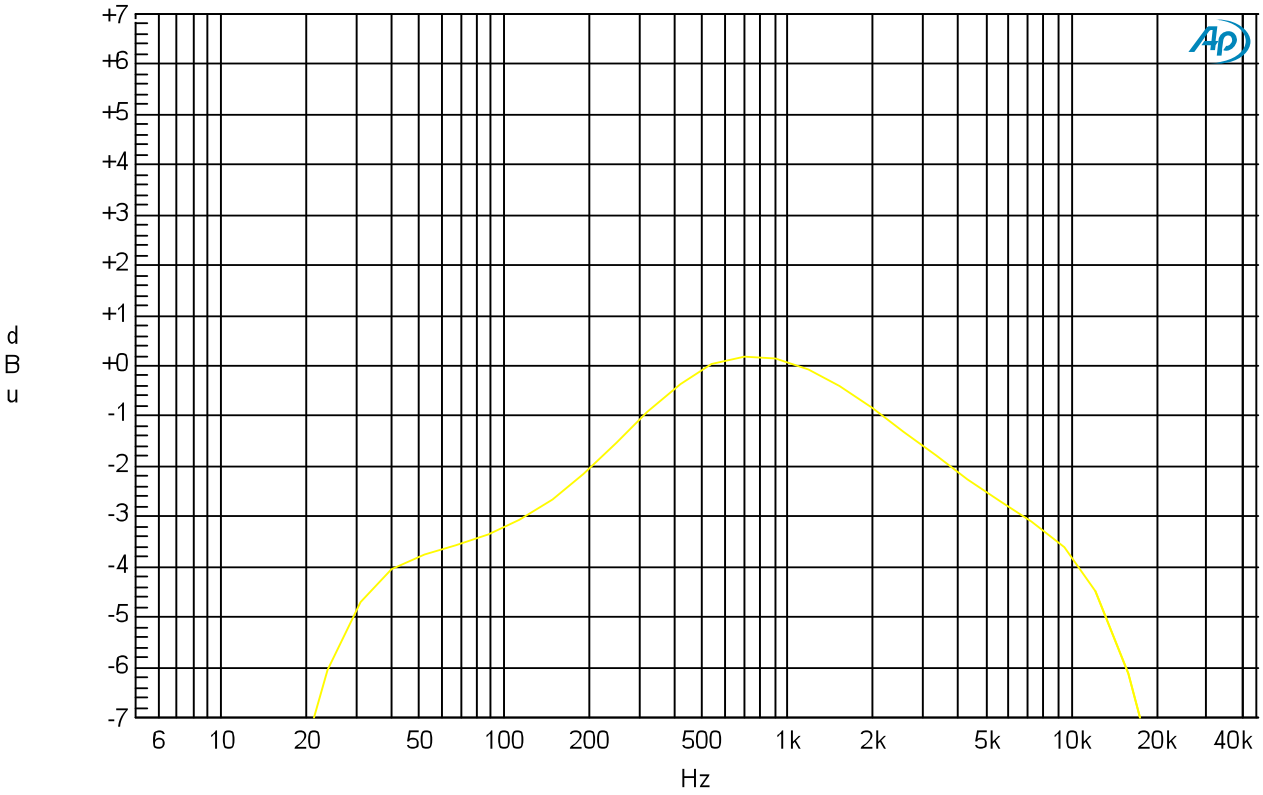
[YOUR SCULPTING PICTURED ABOVE AND MORE ON THE FOLLOWING TWO PAGES]

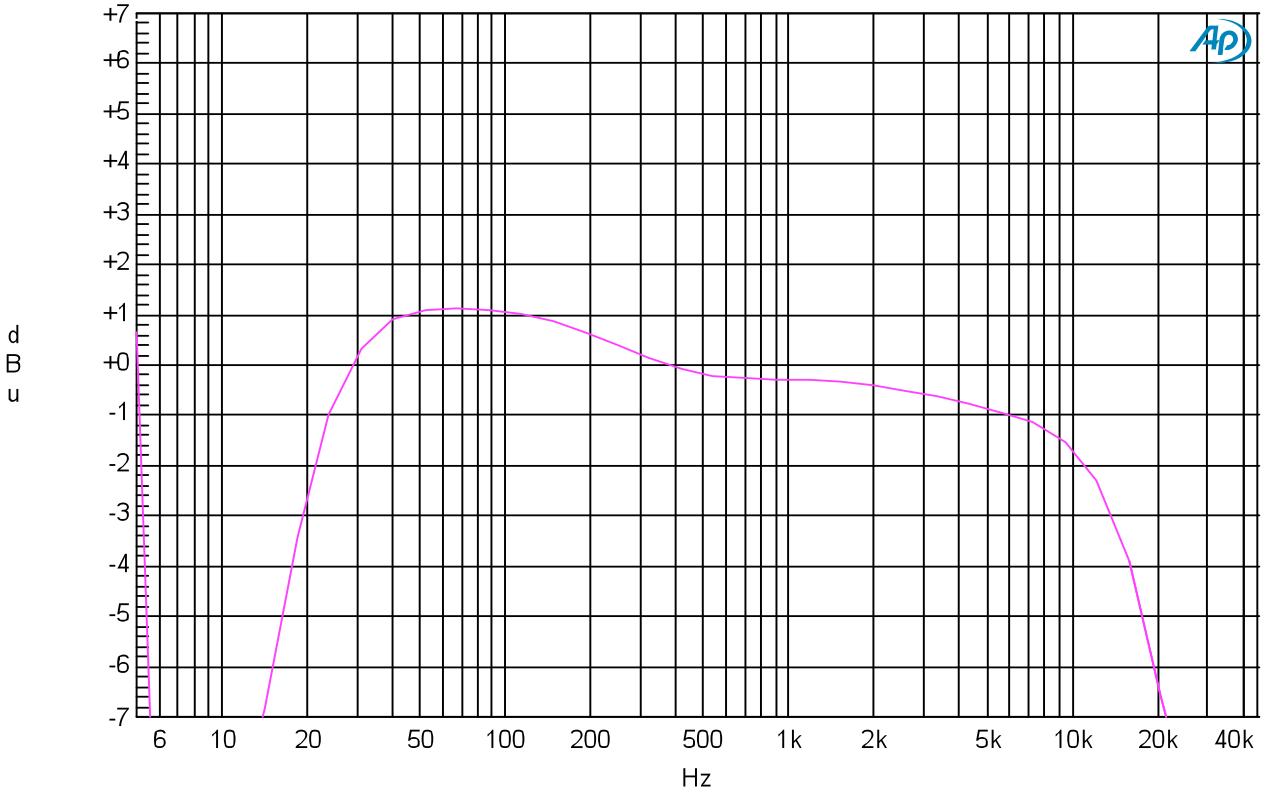
Now it's your turn to actually put the BAX EQ through it's paces (this is why you bought it, after all, right?)

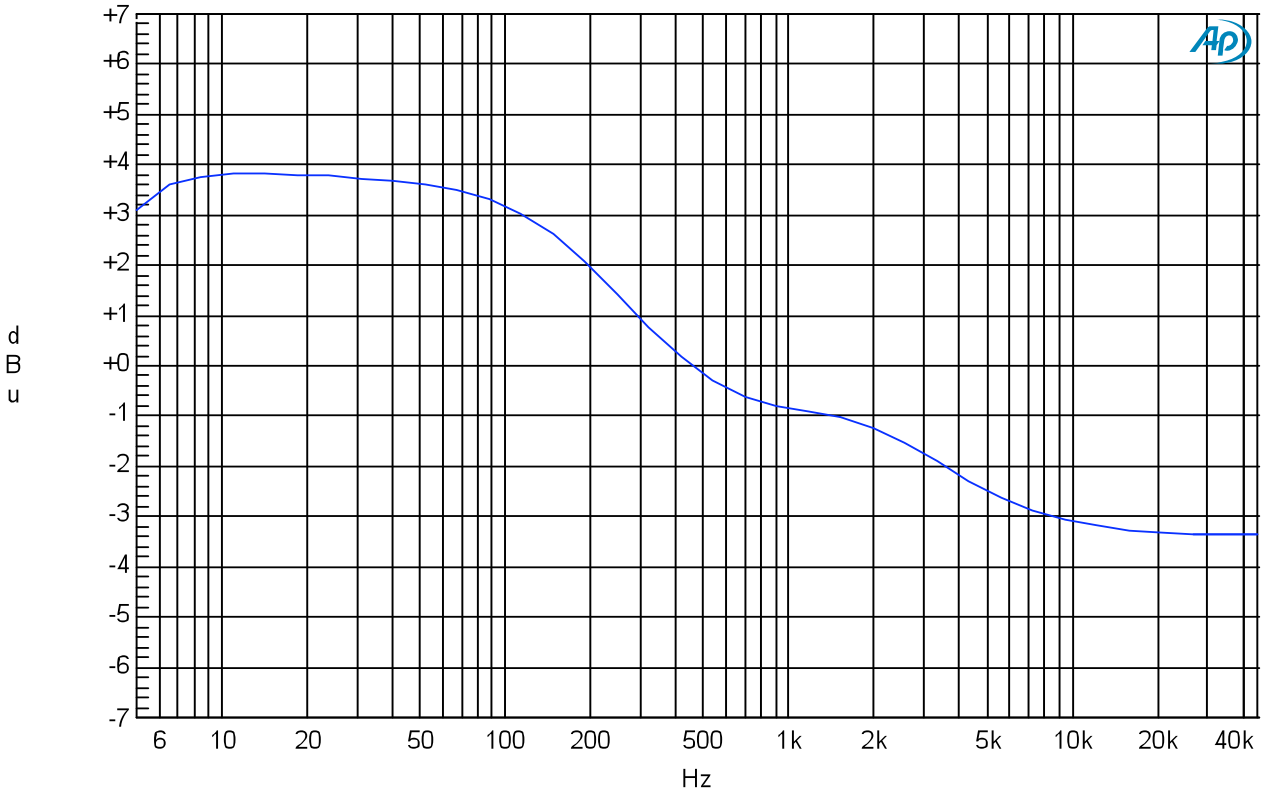
Go ahead and engage the cut controls to remove the garbage and ease the burden on your converters. Remember, these are remarkable shaping tools as well when employed with the shelving and level controls to gracefully sculpt Michelangelo-like audio hillocks and valleys. Go forth and seek the audio truth amongst that audioscape.

-The Dangerous Music Team


+7
+6
+5
+4
+3
+2
+1
+0
-1
-2
-3
-4
-5
-6
-7
dBu
6
10
20
50
100
200
500
1k
2k
5k
10k
20k
40k
Hz

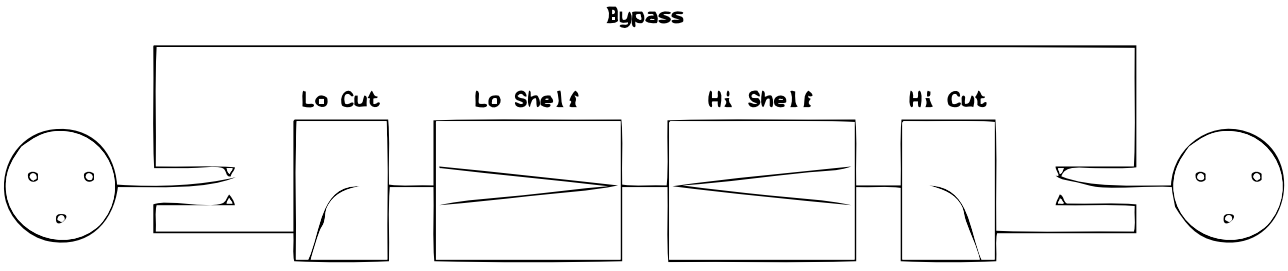

+7
+6
+5
+4
+3
+2
+1
+0
-1
-2
-3
-4
-5
-6
-7
dBu
6
10
20
50
100
200
500
1k
2k
5k
10k
20k
40k
Hz


dBu
+7
+6
+5
+4
+3
+2
+1
+0
-1
-2
-3
-4
-5
-6
-7
6
10
20
50
100
200
500
1k
2k
5k
10k
20k
40k
Hz


dBu
+7
+6
+5
+4
+3
+2
+1
+0
-1
-2
-3
-4
-5
-6
-7
6
10
20
50
100
200
500
1k
2k
5k
10k
20k
40k
Hz

SPECIFICATIONS

Frequency Response	+- 0.1dB from 10Hz to 20kHz +- 0.2dB from 1Hz to 80kHz
Maximum level	> +28dBu
Noise floor	< -92dBu band limited from 22Hz-22kHz
THD+N	< 0.002%
IMD	< 0.003%
Crosstalk rejection	> 105dB
Replacement Fuses:	USA 500mA fast blow for 120V Europe 250mA fast blow for 240V
Input Impedance:	25K Ohms
Output Impedance:	50 Ohms



WARRANTY

1 year from date of purchase by the original owner, parts and labor, subject to factory inspection. Shipping damage, accidental damage, abusive operation or modifications/attempted repairs by unauthorized personnel will result in shop fees payable before return delivery.

USA	EUROPE
Dangerous Music Inc.	Dangerous Music Europe
231 Stevens Road	Stieleichenweg 55
Edmeston, NY 13335	50999 Cologne, Germany
Phone: 607 965-8011	Fon: +49 2236 393731
Fax: 607-965-8012	Fax: + 49 2236 393732
Email: info@dangerousmusic.com	E-mail: info@dangerousmusic.de

Dangerous Music, Inc. reserves the right to alter the software and design of their equipment.

If after reading the manual more information for an application is needed, please contact us via email for the quickest response.

- Factory contact for RA# must occur before shipping a unit to us for service.
- Please keep the original cartons in case storage or transportation of units is required.
- Always insure shipment as these damages are not covered by the warranty.
- Thank you for actually reading the manual. Now go make some Dangerous Music!

revision 3.0 marek September 2010

DANGEROUS

MUSIC

Dangerous Music Inc. 231 Stevens Road, Edmeston, NY 13335 Phone: 607 965-8011 Fax: 607-965-8012 info@dangerousmusic.com www.dangerousmusic.com